

EXHIBIT I

STATUS of WOODLAND CARIBOU
(Rangifer tarandus caribou)
in the JAMES BAY REGION of
NORTHERN QUEBEC

PRESENTED TO THE
Ministère des Ressources naturelles et de la Faune du Québec
AND THE
Grand Council of the Crees (Eeyou Istchee)

BY
Tyler D. Rudolph, M.Sc., UQAM
Pierre Drapeau, Ph.D., UQAM
Martin-Hugues St-Laurent, Ph.D., UQAR
Louis Imbeau, Ph.D., UQAT

WOODLAND CARIBOU RECOVERY TASK FORCE
SCIENTIFIC ADVISORY GROUP
NORD-DU-QUÉBEC

September 2012

This document should be cited as follows:

Rudolph, T. D., Drapeau, P., St-Laurent, M-H. and Imbeau, L. 2012. Status of Woodland Caribou (*Rangifer tarandus caribou*) in the James Bay Region of Northern Quebec. Scientific report presented to the Ministère des Ressources naturelles et de la Faune du Québec and the Grand Council of the Crees (Eeyou Istchee). Montreal, QC. 72 pp.



Photo credit: MRNF



lead to more refined range-specific indicators of risk that may help direct future management efforts.

Given the range-specific variation we have observed in demographic responses to cumulative disturbance, we do not exclude the possibility that herds are responding in a synchronous manner at a scale larger than what we have explicitly measured (i.e. metapopulation). To that effect, relatively little is actually known about metapopulation dynamics in the JBR and the degree to which the Nottaway, Assinica, and Temiscamie herds are related via immigration and emigration. However maintaining and improving functional linkages between these herds is essential if we are to ensure their long-term survival. Given future uncertainty, ensuring the resilience of the regional metapopulation would be advantageous in terms of increasing the likelihood of success of its recovery. One possible solution is to use modeling techniques to prioritize conservation efforts with a view to optimizing landscape connectivity, thereby improving demographic resilience to natural and anthropogenic disturbances. Increasingly, genetic techniques are also being used to reveal valuable insights into population condition, genetic diversity, and landscape connectivity.

Recommendation # 7: Reevaluate the status of woodland caribou in Quebec.

Given available evidence from this body of work and that gleaned from ongoing research being conducted elsewhere in Québec, there is now adequate cause to believe that the majority of woodland caribou populations in the province are currently subject to disturbance levels exceeding what is theoretically required to ensure their persistence. This suggests that their current designation as provincially vulnerable is optimistic and that the status of woodland caribou in Québec is in need of revisiting. The fact that boreal populations of woodland caribou have been designated as threatened in Canada since 2000 (i.e. implying a greater degree or incurred risk) lends additional credence to this notion. We therefore recommend that the QMRNF undertake a new exercise as soon as possible to reevaluate the status of woodland caribou in Québec, thereby taking into account the abundance of new scientific work that has been conducted on the subject since 2005. This re-evaluation will likely have an important

impact on the federal recovery strategy for woodland caribou, which considers the James Bay area to support but one unique and self-sustaining population (Environment Canada 2012). Our findings clearly demonstrate that there are three local populations in the James Bay region, all of which are currently declining. Furthermore, because the Nottaway, Assinica and Témiscamie herds form part of the semi-continuous Canadian boreal population ($n = 12$), they are bound to be of higher conservation priority than those herds considered to be declining and isolated ($n = 28$, Environment Canada 2011).